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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/772,882	02/05/2004	Adam William Saxler	5308-389	8522	
20792 7:	590 07/07/2006		EXAM	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			JACKSON JR, JEROME		
PO BOX 37428	3				
RALEIGH, NC 27627			ART UNIT	PAPER NUMBER	
			2815		

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)	W S			
	10/772,882	SAXLER, ADAM WILLIAM				
Office Action Summary	Examiner	Art Unit				
	Jerome Jackson Jr.	2815				
The MAILING DATE of this communication a Period for Reply	ppears on the cover sheet wi	th the correspondence address				
A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory perions are period for reply within the set or extended period for reply will, by state Any reply received by the Office later than three months after the maximum patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNIC 1.136(a). In no event, however, may a re- od will apply and will expire SIX (6) MON tute, cause the application to become AB	CATION.  Sply be timely filed  IHS from the mailing date of this communication.  ANDONED (35 U.S.C. § 133).				
Status						
1)⊠ Responsive to communication(s) filed on 20	April 2006.					
2a)⊠ This action is <b>FINAL</b> . 2b)□ TI	This action is FINAL. 2b) This action is non-final.					
3) Since this application is in condition for allow	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice unde	r <i>Ex par</i> te Quayle, 1935 C.D	. 11, 453 O.G. 213.				
Disposition of Claims						
4) ⊠ Claim(s) 1-7,11-20,31 and 37-40 is/are pend 4a) Of the above claim(s) is/are withd: 5) ⊠ Claim(s) 1-7 and 11-20 is/are allowed. 6) ⊠ Claim(s) 31 is/are rejected. 7) ⊠ Claim(s) 37-40 is/are objected to. 8) □ Claim(s) are subject to restriction and	rawn from consideration.		·			
Application Papers						
9) The specification is objected to by the Exami 10) The drawing(s) filed on is/are: a) a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correction.  11) The oath or declaration is objected to by the	ccepted or b) objected to be drawing(s) be held in abeyant ection is required if the drawing	ce. See 37 CFR 1.85(a). s) is objected to. See 37 CFR 1.121(d).				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the priority docume application from the International Bure * See the attached detailed Office action for a life.	ents have been received. ents have been received in A riority documents have been eau (PCT Rule 17.2(a)).	oplication No received in this National Stage				
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/0 Paper No(s)/Mail Date	Paper No(s	ummary (PTO-413) )/Mail Date formal Patent Application (PTO-152)				

Application/Control Number: 10/772,882

Art Unit: 2815

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 31 rejected under 35 U.S.C. 103(a) as being unpatentable over APA or Adesida in view of Chen, Wang and Eastman and further in view of Chang, all of record. The previous rejection still applies. The limitation "quantum well" and the recited functional language do not structurally or functionally distinguish over the recited art where the p-doped barrier comprises a "quantum well" and provides the required "function". The p-barrier forms a "quantum well" for holes and a "barrier" for electrons. The claim recitations are broad because "quantum well" is broad.

Claims 37-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-7,11-20 are allowed.

Applicant's arguments filed 4/20/06 have been fully considered but they are not persuasive. Arguments regarding claim 31 are addressed above. As stated "quantum well" is broad and neither structurally nor functionally distinguishes over the applied art.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson Jr. whose telephone number is 571-272-1730. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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